



Direct Dial/Ext: 03000 418 381
e-mail: Emily.kennedy@kent.gov.uk
Ask for: Emily Kennedy
Date: 14 November 2024

Dear Member

KENT FLOOD RISK AND WATER MANAGEMENT COMMITTEE - WEDNESDAY, 20 NOVEMBER 2024

I am now able to enclose, for consideration at next Wednesday, 20 November 2024 meeting of the Kent Flood Risk and Water Management Committee, the following reports that were unavailable when the agenda was printed.

Agenda Item No

7

Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity (Pages 1 - 20)

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ben Watts', is written over a faint circular stamp.

Benjamin Watts
General Counsel

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To: Kent Flood Risk Management Committee – 20th November 2024
From: Rebecca Spore, Director of Infrastructure, Strategic and Corporate Services
Subject: Environment Agency and Met Office Alerts and Warnings and KCC severe weather response activity.
Classification: Unrestricted

Summary: To update Kent Flood Risk Management Committee on the current water situation, weather statistics, Environment Agency and Met Office Warnings, and flood response activity since the last meeting of the Committee on 14th March 2024.

1. Background

- 1.1 This report is the latest of the regular updates to the Committee addressing the current water situation and recent severe weather and associated emergency response activity in Kent.
- 1.2 The KCC Resilience and Emergency Planning Service Duty Emergency Planning Officer (DEPO) and Contact Point receive Environment Agency (EA) and Met Office alerts and warnings regarding severe weather on a 24/7 basis. Any site-specific severe weather impacts are notified to the DEPO by the emergency services and other resilience partners, with reports from the public received by Contact Point and passed on to the DEPO and/or Kent Highways. DEPO further initiates multiagency reporting using the County Council's innovative Severe Weather Impacts System (SWIMS) to capture resources and costs arising from severe weather incidents.
- 1.3 Some 85,500 residential and commercial addresses across Kent are located within areas identified as at risk from fluvial (river) or tidal (coastal) flooding. Where possible, flood vulnerable properties are offered a Flood Warning Service by the EA. Early warning of flood risk to communities (including areas outside of floodplains) is delivered through Flood Guidance Statements, Severe Weather Warnings and mobilisation of the Kent and Medway Resilience Forum (KMRF) Severe Weather Advisory Group (SWAG).

2. Kent water situation and weather statistics

- 2.1 The whole of the Kent and South London (KSL) area received 193% of the Long-Term Average (LTA) rainfall during September. Rainfall received across catchments in the area ranged from normal to exceptionally high. The percentage of LTA rainfall received across catchments ranged from 95% across Thanet Chalk rainfall area to 278% in the Medway rainfall area. The highest daily rainfall total of 60.3mm for September was recorded at Sundridge Pumping Station (PS) rain gauge in the Darent catchment on the 22 September. In September, 2 dry days where less than 0.2mm of rainfall was received were recorded on 17 and 31 September.

- 2.2 The Medway and Eastern Rother catchments recorded the wettest September on record since records began in 1871 to the monthly water situation report by the environmental agency.
- 2.3 The highest daily rainfall totals were on 24, 15, 23 and 30 August and ranged from 24.8mm to 8.4mm. In August, 5 dry days where less than 0.2mm of rainfall was received were registered
- 2.3 The latest river flow data available from the Environment Agency, shows the Mean Monthly Flows (MMFs) ranged from notably high to exceptionally high in September. Three key flow sites saw notably high MMFs all located in the east of the patch. Eight flow sites across the remaining areas of the catchment saw exceptionally high MMFs during September. The R. Rother at Bodiam recorded the highest percentage LTA of 622% for the month of September. The R. Stour at Horton recorded the lowest percentage LTA of 142%.
- 2.4 Groundwater levels continued to fall consistently across the whole KSL area, ranging from normal to exceptionally high in August. This is due to the drier weather seen in that area in August.
- 2.5 Levels in three of the five reservoirs in KSL decreased in September: Bewl, Darwell and Bough Beech. Powdermill and Weirwood reservoir levels increased. Weirwood reservoir is currently offline.
- 2.6 Hands off flow constraints were removed for certain licensed abstractions within the Rother, Medway and Stour catchments during September. Eighteen fluvial flood alerts and nine flood warnings were issued by the EA from 22 September to 30 September¹
- 2.7 The Met Office issued 21 weather warnings (including updates): 21 Yellow, 0 Amber & 0 Red. 2 Low Impact, 19 Medium Impact and 0 High Impact. There were 14 rain warnings and 7 thunderstorm warnings²
- 2.8 Met Office Kent statistics for March to June 2024 are set out in full at Appendix 4 of this report.

3. Recent incident response

- 3.1 Regarding severe weather warnings the situation was monitored and no action to taken other then liaising with the environmental agency and informing highway agencies. Regarding flood alerts action were taken due to surface water flooding and liaised with EA and reported to highways.

Alert Register			
Time	Date	Received from	Incident
10:20	15/07/2024	Met Office	Severe weather - yellow
10:00	29/07/2024	Met Office	Severe weather - yellow
10:17	23/08/2024	Met Office	Severe weather - yellow
10:29	23/08/2024	Environment Agency	Flood impacts
10:04	03/09/2024	Environment Agency	Flood impacts
10:10	03/09/2024	Met Office	Severe weather - amber, Severe weather - yellow
03:36	03/09/2024	Met Office	Severe weather - yellow
09:01	04/09/2024	Met Office	Severe weather - yellow
10:02	04/09/2024	Met Office	Severe weather - yellow
12:15	05/09/2024	Environment Agency	Flood impacts
10:35	07/09/2024	Met Office	Severe weather - yellow
13:20	21/09/2024	Met Office	Severe weather - yellow
07:29	23/09/2024	Environment Agency	Flood impacts
10:16	25/09/2024	Met Office	Severe weather - yellow
10:30	25/09/2024	Environment Agency	Flood impacts
09:33	07/10/2024	Met Office	Severe weather - yellow
10:01	08/10/2024	Met Office	Severe weather - yellow
14:32	08/10/2024	Met Office	Severe weather - yellow
11:27	14/10/2024	Environment Agency	Severe weather - yellow

4. Outlook

- 4.1 The Met Office three-month outlook summary indicates a 10% chance that the season will be cooler than average (0.5 times the normal chance), a 55% chance that it will be near average (0.9 times the usual chance) and a 35% chance that it will be warmer than average (1.8 times the usual chance). In terms of rainfall, the summary indicates a 20% chance the season will be drier than average, 60% chance that it will be near average and a 20% chance it will be wetter than average. As regards likely wind speeds, the summary suggests a 25% chance that it will be calmer than average, a 55% chance that they will be near average and 20% chance of windier than average conditions
- 4.2 The EA continuously runs surge forecasts, informed by astronomical tide calculations. If a risk of coastal flooding is forecast, then this information is communicated to partners. Forthcoming high tides will be 24th – 27th July, 20th – 24th August, 17th – 22nd September and 16th – 21st October. However, it is worthy of note that coastal flooding can occur outside of high tides.

5. Recommendations

- 5.1 That Members note the warnings received since the last meeting of the Committee; and contribute to planning and response policy and practice through oversight and debate.

6. Contact Details

Report Authors: Andy Jeffery (Head of Resilience & Emergency Planning), Infrastructure, Deputy Chief Executive's Department, tel. 03000 421 871, e-mail andy.jeffery@kent.gov.uk

Roshana Iruthayaraj (Project Officer, Compliance & Community Resilience Team, Resilience & Emergency Planning Service), Infrastructure, Deputy Chief Executive's Department, tel. 03000 421 871, e-mail roshana.iruthayaraj@kent.gov.uk




Relevant Director: Rebecca Spore (Director of Infrastructure), Deputy Chief Executive's Department tel. 03000 412 064, email rebecca.spore@kent.gov.uk

Appendix 1: EA Flood Alerts and Warnings issued since 1st June 2024

EA Flood Alerts and Warnings issued since 01/06/2024			
No.	Date issued	Flood Zone	Status
1	10/06/2024	Thames Barrier	Thames Barrier closure alert
2	09/07/2024	Thames Barrier	Thames Barrier closure alert
3	15/07/2024	Kent	Flood Guidance Statement
4	01/08/2024	Shuttle and Cray	Flood Alert
5	02/08/2024	Rivers Eden and Eden Brook Area	Flood Alert
6	08/08/2024	Thames Barrier	Thames Barrier closure alert
7	22/08/2024	Isle of Sheppey and Coast from Kemsley to Seasalter	Flood Alert
8	21/09/2024	Kent	Flood Guidance Statement
9	22/09/2024	River Rother and its tributaries from Turks Bridge to the Royal Military Canal	Flood Alert
10	23/09/2024	Upper River Medway Area	Flood Alert
11	23/09/2024	River Teise area from Lamberhurst to Goudhurst	Flood Alert
12	23/09/2024	Rivers Eden and Eden Brook Area	Flood Alert
13	23/09/2024	River Bourne from Hadlow to East Peckham	Flood Alert
14	23/09/2024	River Darent from Westerham to Dartford	Flood Alert
15	23/09/2024	River Teise area from Lamberhurst to Goudhurst	Flood Warning
16	23/09/2024	River Medway between Forest Row and Penshurst	Flood Warning
17	23/09/2024	Rivers Eden and Eden Brook Area	Flood Warning
18	23/09/2024	Kent	Flood Guidance Statement
19	23/09/2024	Middle River Medway Area	Flood Alert
20	23/09/2024	Lower River Medway Area	Flood Alert
21	27/09/2024	Upper River Medway Area	Flood Alert
22	30/09/2024	Rivers Eden and Eden Brook Area	Flood Alert
23	30/09/2024	Upper River Medway Area	Flood Alert
24	30/09/2024	River Rother and its tributaries from Turks Bridge to the Royal Military Canal	Flood Alert
25	07/10/2024	Shuttle and Cray	Flood Alert

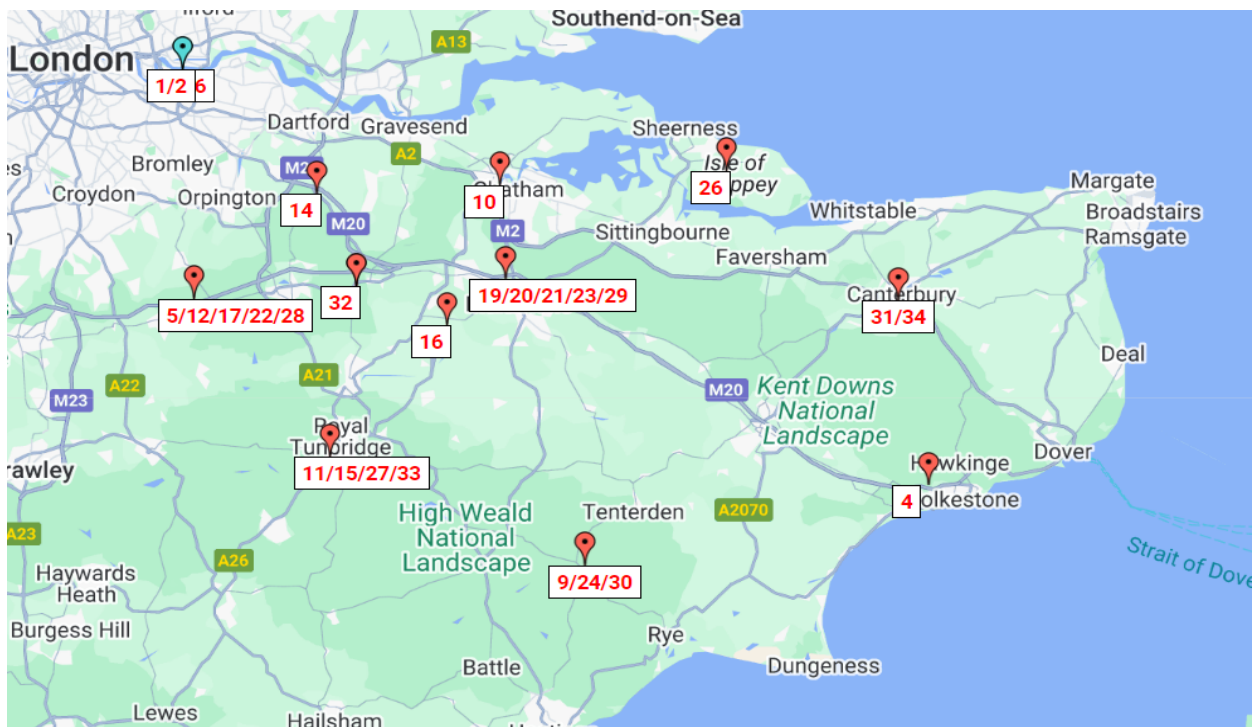
26	08/10/2024	Rivers on the Isle of Sheppey	Flood Alert
27	09/10/2024	River Teise area from Lamberhurst to Goudhurst	Flood Alert
28	09/10/2024	Rivers Eden and Eden Brook Area	Flood Alert
29	09/10/2024	River Medway between Forest Row and Penshurst	Flood Alert
30	09/10/2024	River Rother and its tributaries from Turks Bridge to the Royal Military Canal	Flood Alert
31	09/10/2024	Upper River Stour	Flood Alert
32	09/10/2024	River Bourne from Hadlow to East Peckham	Flood Alert
33	09/10/2024	River Teise and Lesser Teise area from Horsmonden to Yalding	Flood Alert
34	17/10/2024	Flood Alert in force: Upper River Stour. Flooding is possible for: East Stour.	Flood Alert
35	17/10/2024	Flood Alert in force: Coast from Ramsgate to Kingsdown.	Flood Alert
36	17/10/2024	Flood Alert in force: Coast from Sandgate to Dungeness.	Flood Alert
37	17/10/2024	Flood Alert in force: Coast from St Margaret's at Cliffe to Sandgate.	Flood Alert

Appendix 1.2: EA Flood Alerts and Warnings Glossary for visual map display
- Issued since 1st June 2024 Map

EA Flood Alerts and Warnings issued since 1 st June 2024 Map	
Pin	Meaning
	Thames barrier closure alert
	River zones
	Coastal zones

Appendix 1.3: EA Flood Alerts and Warnings visual map display

- Issued since 1st June 2024



Appendix 1.4: EA Flood Alerts and Warnings visual map display

- Issued since 1st June 2024 Map



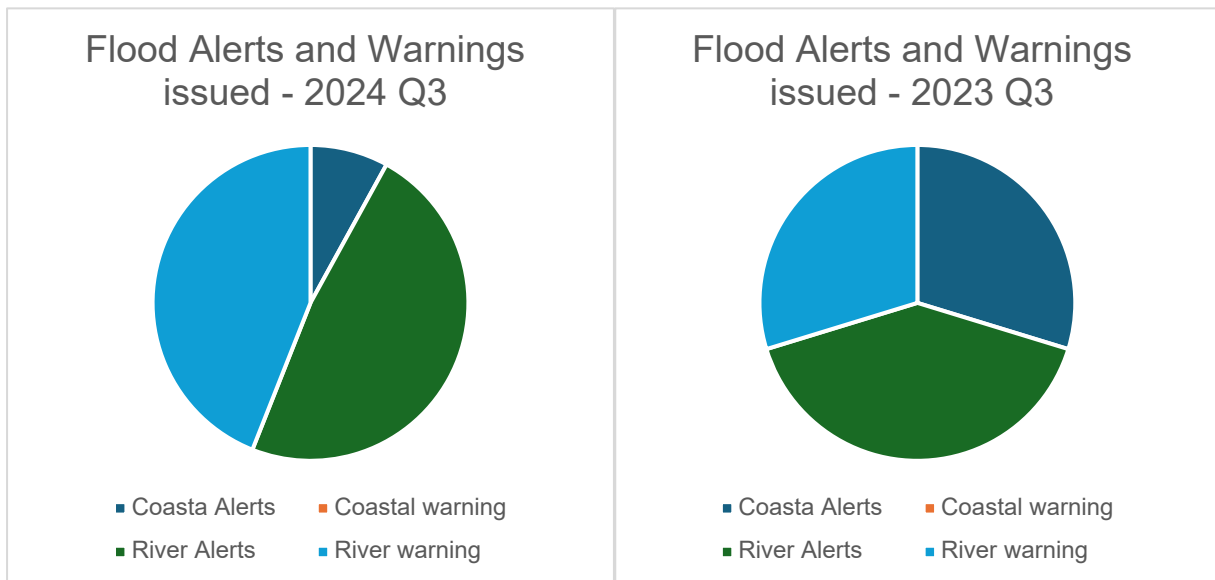
Appendix 1.5: EA Flood Alerts and Warning Table

- Comparing 2024 Q3/Q2 and 2023 Q3/Q2

EA Flood Alerts and Warnings issued since 1 st June 2022 – Breakdown						
Time Period	Coastal alerts	Coastal warning	River Alerts	River Warnings	Total Alerts	Total warnings
2024 Q2	16	1	12	1	28	2
2024 Q3	4	-	24	3	28	3
2023 Q2	1	-	19	-	20	-
2023 Q3	22		30	2	52	2

Appendix 1.6: EA Flood Alerts and Warning Pie chart

- Comparing 2024 Q3 and 2023 Q3



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Appendix 2: Met office Severe weather warnings – June to September

Weather Element	Number of Warnings	No of Different Events	Dates covered by Events
Thunderstorm	7	4	July: 31 August: 1 September: 1-2, 21
Rain	14	7	August: 24 September: 4-5, 5-6, 7-8, 21-22, 22-23, 26-27

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Appendix 3 - Thames Barrier closures

Source – Environment Agency

	2024 Q3	2024 to date	2023 Q3	2023 (all)
Operational closures	0	17	1	6
Test closures	3	4	4	10

Date of operational closures (2024 Q3) – 8th August 10th September 6th October

Date of test closures (2024 Q2) – 10th June

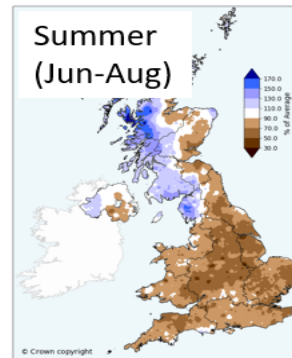
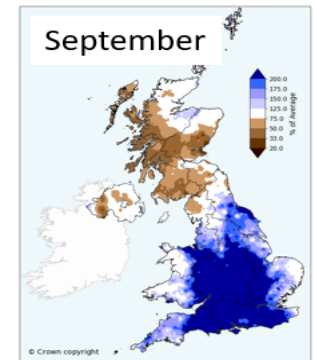
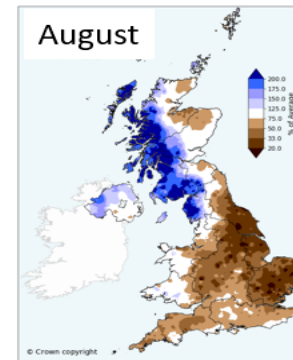
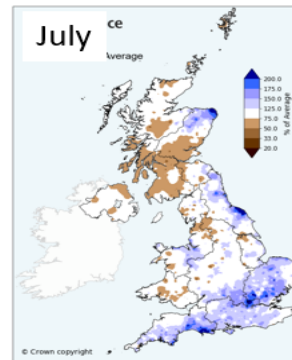
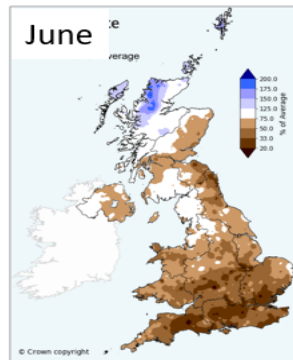
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Kent Statistics – June to September 2024

Month	Rain	Mean Max Temp
June	38%	-0.4 C
July	115%	-0.3 C
August	57%	+1.0 C
Summer (Jun-Aug)	68%	+0.1 C
September	192%	+0.3 C

Compared to 1991-2020 long Term Average



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Kent Warnings – June to September 2024

21 Warnings issued (including updates): 21 Yellow, 0 Amber & 0 Red

- 2 Low Impact, 19 Medium Impact, 0 High Impact

Weather Element	Number of Warnings	No of Different Events	Dates covered by Events
Thunderstorm	7	4	July: 31 August: 1 September: 1-2, 21
Rain	14	7	August: 24 September: 4-5, 5-6, 7-8, 21-22, 22-23, 26-27

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3-month Outlook – October to December

<https://www.metoffice.gov.uk/services/government/contingency-planners/index>

Temperature



Precipitation



Wind



Summary

- The chances of a wet period are similar to normal
- A similar to normal likelihood of a windy period
- Only a small chance of the period being cold overall
- However, cold spells and related impacts remain possible, especially later in the period

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